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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/786,633	02/25/2004	Hans Boman	68765-00015USP1	3099
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/786,633	<b>Applicant(s)</b> BOMAN ET AL.	
	<b>Examiner</b> Ashford S. Hayles	<b>Art Unit</b> 3687	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 24 February 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____.                                     |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>7/28/2004, 5/27/2005, 5/31/2005, 7/18/2005,</u>               | 6) <input type="checkbox"/> Other: _____.                         |
| <u>7/18/2005, 8/26/2005, 10/31/2005, 12/01/2005, 4/03/2006, 12/18/2006.</u>            |   |



### DETAILED ACTION

1. This communication is a first Office Action Non-Final rejection on the merits. Claims 1-26, as originally filed on February 25, 2004, are currently pending and have been considered below.

#### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. **Claims 1-6, 8-15, and 18-20 rejected under 35 U.S.C. 102(b) as being anticipated by Radican (#6,148,291).**

**As per Claim 1**, Radican, discloses a reader for monitoring the movement of cargo, the reader comprising:

means for transmitting and receiving information (Col. 5, line 34 remote container data transceivers);

an internal signal receiver for receiving indicators, from a device, related to a position of a particular piece of cargo to which the device is affixed (Col. 5, lines 5-7 discuss means for recording status and location of containers within a facility boundary); and

means for logging position-based data of the particular piece of cargo (Col. 5, lines 10-11 discuss the system monitors and records all container movements and locations within the facility boundaries).

**As per Claim 2**, Radican discloses the reader of claim 1, wherein the internal signal receiver comprises an internal signal strength receiver for registering at least one received signal that indicates the position of a particular piece of cargo (Col.13, lines 19-22 discuss the use of radio frequency identification (RFID) tags and readers, enables rapid acquisition and updating of container location and status).

**As per Claim 3**, Radican discloses the reader of claim 1, wherein the internal signal receiver comprises an internal time of arrival receiver for registering a time of arrival that indicates the position of a particular piece of cargo (Col. 4, lines 52-54 discuss important time sensitive data on containers and container loads which the system uses is collected at entry points to a facility boundary B such as gate G).

**As per Claim 4** Radican discloses the reader of claim 1, further comprising means for transmitting measured a Time Difference Of Arrival (TDOA) value of a particular piece of cargo to a server for calculation of the position or change in position (Col. 6, lines 21-25 discuss the recorded time of arrival of a container starts a retention time clock to accurately measure the total amount of time a container is retained on the premises of the destination facility such as facility).

As per Claim 5, Radican discloses the reader of claim 1, wherein the reader receives indicators from a plurality of devices affixed to a plurality of respective pieces of cargo (Col. 5, lines 37-41 discuss hardware arrangement of the system, one or more container data input terminals and monitors may be located at a gate or gates for input of data acquired from incoming and outgoing containers into the CMCS).

**As per Claim 6**, Radican discloses the reader of claim 1, wherein the indicator represents an absolute position of the cargo (Col. 8, lines 54-55 discuss current yard location of each container is listed).

**As per Claim 8**, Radican discloses the reader of claim 1, wherein the reader receives indicators at predetermined time intervals (Col. 8, lines 29-31 discuss the system continuously tracks the location and status of all containers on the premises at all times).

**As per Claim 9**, Radican discloses the reader of claim 1, wherein the reader is included in a system comprising a plurality of readers (Col. 13, lines 24-26 discuss tag or card readers are located at facility boundaries such as gate G, or in yards or at docks to automatically identify containers).

**As per Claim 10**, Radican discloses the reader of claim 1, wherein the reader is attached to a portion of an ocean-going vessel (Col. 5, lines 1-4 discuss the system is readily adaptable to other modes of shipping such as inter-modal ship/rail/truck containers, air freight containers, tankers, waste haulers, or any other type of shipping container).

**As per Claim 11**, Radican discloses the reader of claim 1, wherein the reader is attached to a portion of a train (Col. 5, lines 1-4 discuss the system is readily adaptable to other modes of shipping such as inter-modal ship/rail/truck containers, air freight containers, tankers, waste haulers, or any other type of shipping container).

**As per Claim 12**, Radican discloses the reader of claim 1, wherein the reader is oriented in a shipping yard (Col. 5, lines 37-41 discuss hardware arrangement of the

system, one or more container data input terminals and monitors may be located at a gate or gates for input of data acquired from incoming and outgoing containers into the CMCS, Col. 4, lines 31-34 discuss a facility may be a factory, warehouse sub-assembly plant, freight transfer station, distribution center, or any other place where shipping containers are loaded or unloaded).

**As per Claim 13**, Radican discloses the reader of claim 1, wherein the reader is oriented in a warehouse (Col. 5, lines 37-41 discuss hardware arrangement of the system, one or more container data input terminals and monitors may be located at a gate or gates for input of data acquired from incoming and outgoing containers into the CMCS, Col. 4, lines 31-34 discuss a facility may be a factory, warehouse sub-assembly plant, freight transfer station, distribution center, or any other place where shipping containers are loaded or unloaded).

**As per Claim 14**, Radican discloses the reader of claim 1, wherein the reader is a second device and is included in an ad hoc network (Col.5, lines 44-50 discuss input methods and devices include RFID tag and reader technology, ultrasonic detectors, optical scanners and RF data communications devices, which are operable on an ad hoc network).

**As per Claim 15**, Radican discloses a server for monitoring movement of cargo, the server comprising:

means for storing a data map representing a position of each piece of cargo (Col.12, lines 36-39 discuss a graphic form of a yard slot availability report, wherein

various yards are identified in the left side column, and yard slots across the upper line.

This creates a matrix in which a container location can be identified graphically);

means for receiving indicators from at least one reader, said indicators representing a current position for a particular piece of cargo (Col. 5, lines 5-7 discuss means for recording status and location of containers within a facility boundary); and

means for determining, based on the data map and the received indicators, whether a particular piece of cargo has moved beyond a predetermined threshold. (Col.13, line 39 discuss the system generates a mapping screen, Col. 10, lines 8-11 discuss by controlling the plant entry points and premises, the system maintains accurate location of all containers on the premises, thus allowing the system to identify a container that has moved beyond the predetermined entry points within the premises).

**As per Claim 18**, Radican discloses the server of claim 15, wherein the means for storing further comprises means for storing identification information for a particular piece of cargo (Col. 9, lines 47-49 discuss a format for a container identification header to be created, header is used as a virtual data envelope by and through which all data relevant to an identified container is accessible, transferable, manipulable).

**As per Claim 19**, Radican discloses the server of claim 18, wherein the identification information comprises at least one of a license plate number, weight, and type of cargo (Figure 3, Detail On Hand Report 100, where, column 9 is provided for entry of load-specific data such as contents identification and quantities and any other load data as may be included).



**As per Claim 20**, Radican discloses the server of claim 15, wherein the server receives indicators at predetermined time intervals (Col. 8, lines 29-31 discuss the system continuously tracks the location and status of all containers on the premises at all times).

**4. Claims 7, 16-17, and 21-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Radican (#6,148,291) in view of Crabtree et al. (PG PUB. 2003/0034887).**

**As per Claim 7**, Radican discloses the reader of claim 1. However, Radican fails to disclose wherein the indicator represents a directional vector of the cargo.

Crabtree et al. teaches the locator module can also further include an internal compass unit operable to convert a relative direction of the transceiver module to a magnetic bearing (pg.3, ¶ [0035]).

Therefore, it would have been obvious to one of ordinary skill in the art to modify the container and inventory monitoring system of Radican to include an internal compass unit to determine a relative direction as taught by Crabtree et al. in order to notify the user of the location of the transceiver (pg.1 ¶ [0014]).

**As per Claim 16**, Radican discloses the server of claim 15. However, Radican fails to disclose wherein if the particular piece of cargo has moved beyond the predetermined threshold, then an alarm is generated .

Crabtree et al. teaches user can then select alarm conditions which can be compared against the location of each transceiver in the group. For instance, alarm conditions can include: transceiver beyond a specified range, transceiver outside

specified range of bearings, change in location (movement) beyond a specified amount (pg.13, ¶ [0130]).

Therefore, it would have been obvious to one of ordinary skill in the art to modify the container and inventory monitoring system of Radican to include the alarm conditions as taught by Crabtree et al. in order to notify the user of the location of the transceiver (pg.1 ¶ [0014]).

**As per Claim 17**, Radican discloses all elements of the claimed invention. However, Radican fails to disclose wherein the alarm is an audio alarm.

Crabtree et al. teaches the transceiver is operable to emit an audible tone (pg.14, ¶ [0137]).

Therefore, it would have been obvious to one of ordinary skill in the art to modify the container and inventory monitoring system of Radican to include an audible tone as taught by Crabtree et al. in order to notify the user of the location of the transceiver (pg.1 ¶ [0014]).

**As per Claim 21**, Radican discloses a method of monitoring movement of cargo on a shipping vessel, the method comprising:

determining a data map, based on a Time Difference Of Arrival (TDOA) value, including a position for each piece of cargo prior to moving the shipping vessel (Col.12, lines 36-39 discuss a graphic form of a yard slot availability report, wherein various yards are identified in the left side column, and yard slots across the upper line. This creates a matrix in which a container location can be identified graphically, Col.6, lines 21-25 discuss the recorded time of arrival of a container starts a retention time clock to

accurately measure the total amount of time a container is retained on the premises of the destination facility such as facility);

monitoring a position of each piece of cargo during movement of the shipping vessel (Col. 5, lines 5-7 discuss means for recording status and location of containers within a facility boundary).

However, Radican fails to disclose providing an alarm if a piece of cargo moves beyond a predetermined threshold.

Crabtree et al. teaches user can then select alarm conditions which can be compared against the location of each transceiver in the group. For instance, alarm conditions can include: transceiver beyond a specified range, transceiver outside specified range of bearings, change in location (movement) beyond a specified amount (pg.13, ¶ [0130]).

Therefore, it would have been obvious to one of ordinary skill in the art to modify the container and inventory monitoring system of Radican to include the alarm conditions as taught by Crabtree et al. in order to notify the user of the location of the transceiver (pg.1 ¶ [0014]).

**As per Claim 22**, Radican discloses The method of claim 21, wherein the method further comprises equipping each piece of cargo with a permanently-installed device (Col.13, lines 27-30 discuss automated container data input can alternatively be accomplished by the use of scannable bar code tags).

**As per Claim 23**, Radican discloses The method of claim 22, wherein the method further comprises equipping each piece of cargo with a reusable, non-

permanently-installed device (Col.13, lines 27-30 discuss automated container data input can alternatively be accomplished by the use of magnetically encoded cards and readers).

**As per Claim 24**, Radican discloses the method of claim 22, wherein the step of monitoring further comprises:

receiving indicators from at least one device, the indicators for indicating a position of a particular piece of cargo (Col. 5, lines 5-7 discuss means for recording status and location of containers within a facility boundary); and

determining, based on the data map and the received indicators, whether a particular piece of cargo has moved (Col.13, lines 45-53 discuss may be displayed such as field 1013 of FIG. 10B. In other words, it provides an archival history of the specified container at the specified site, i.e., when it arrived, how many switch moves have been made, how many and which docks it has been at).

**As per Claim 25**, Radican discloses The method of claim 21, wherein the step of determining a data map comprises calculating a position for each piece of cargo a plurality of times (Figure 12B, History Archive).

**As per Claim 26** Radican discloses The method of claim 21, wherein the step of determining a data map comprises calculating the position by using History Based Algorithms (HBA) times (Figure 12B, History Archive and Figure 10B, Move History Field 1013).

***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Auerbach et al. (#6,753,775) discloses a smart container monitoring system.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ashford S. Hayles whose telephone number is 571-270-5106. The examiner can normally be reached on Monday thru Thursday 8:30 to 4:00 Eastern Time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Gart can be reached on (571) 272-3955. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Elaine Gort/  
Primary Examiner, Art Unit 3687

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/A. S. H./

Examiner, Art Unit 3687